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IS 697 (2005): Textiles - Druggets (Durries) made from wool, camel hair and goat hair [TXD 4: Wool and Wool Products]



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“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
वस्त्रादि — ऊन, केमल और गोट के बाल
से बना ड्रगेट (दरी) — विशिष्टि
(पहला पुनरीक्षण)

Indian Standard

TEXTILES — DRUGGETS (*DURRIES*) MADE FROM
WOOL, CAMEL HAIR AND GOAT HAIR — SPECIFICATION
(*First Revision*)

ICS 59.060.10;59.080.60

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Wool and Wool Products Including Floor Coverings Sectional Committee had been approved by the Textile Division Council.

This standard was first published in 1965. This revision has been taken up to update the standard on the basis of experience gained during its use to cover the following major changes:

- a) Keeping in view the similarity in requirements and end use, IS 2882 : 1964 'Specification for camel hair druggets' and IS 3184 : 1965 'Specification for kelim (woollen druggets)' have been amalgamated with this standard to cover all three in one standard.
- b) Additional variety of the druggets made from goat hair has been incorporated.
- c) Title of this standard has been modified to include druggets made from wool, camel hair and goat hair.
- d) The term plain weave has been elaborated.
- e) Sampling and criteria for conformity have been modified.

The composition of the Committee responsible for formulation of this standard is given in Annex E.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

TEXTILES — DRUGGETS (*DURRIES*) MADE FROM WOOL, CAMEL HAIR AND GOAT HAIR — SPECIFICATION

(*First Revision*)

1 SCOPE

1.1 This standard prescribes constructional details and other requirements of three varieties of handmade druggets made from wool, camel hair and goat hair.

1.2 This standard does not specify the general appearance or finish of the druggets (*see also* 4.4).

2 REFERENCES

The following standards contain provisions which through reference in this text constitute provisions of this standard. At the time of publications, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
196 : 1966	Atmospheric conditions for testing (<i>revised</i>)
688 : 1988	Method for determination of colour fastness of textile materials to organic solvents (<i>first revision</i>)
767 : 1988	Method for determination of colour fastness of textile materials to water (<i>first revision</i>)
2454 : 1985	Methods for determination of colour fastness of textile materials to artificial light (Xenon lamp) (<i>first revision</i>)

3 GENERAL REQUIREMENTS

3.1 Yarn

The druggets shall be manufactured with cotton yarn in the warp and wool/camel hair/goat hair yarn in the weft. The approximate count of warp and weft yarn is given in Table 1. The weft yarn shall be spun from dry and clean-carded wool/camel hair/goat hair, free from admixture of non-woollen fibre. The yarn shall be dyed with suitable dyes to shades as agreed to between the buyer and the seller. The dyed yarn shall be uniform in colour and shall not differ in shade. Undyed yarn shall be washed before weaving.

3.2 Druggets

The druggets shall be woven in plain weave either by beating the weft with *Punja* or on shuttle looms with the help of shuttle. No warp thread shall be visible either on the upper or on the lower surface. The druggets shall be free from bad odour.

3.2.1 The selvages shall be woven firmly and uniformly. There shall be two selvedge ends on either each selvedge end consisting of three warp threads twisted together or as agreed to between the buyer and the seller.

3.2.2 The weft thread shall be looped around the warp at a place where the vertical slanting or uncovered lines of the design require that a particular weft thread shall terminate.

3.2.3 Transverse ends of the druggets shall be woven in plain weave with cotton weft of the same count as in the warp and three consecutive warp threads knotted together. The loose ends of the knot shall be at least 50 mm long.

4 SPECIFIC REQUIREMENTS

4.1 Construction

The druggets shall comply with the requirements of Table 1. Permissible tolerance and the methods of test for the various requirements have also been prescribed in Table 1.

4.2 Colour Fastness

The druggets manufactured with dyed wool/camel hair/goat hair or dyed yarn shall be fast to light, water and organic solvents. The colour fastness ratings shall be as specified in Table 2, when tested by the relevant method.

4.3 Length and Width

The length and width of druggets shall be as agreed to between the buyer and the seller. A tolerance of ± 2 percent both in the length and width of druggets shall be permitted. The two diagonals of the druggets shall not vary by more than 3 percent.

**Table 1 Requirements of Druggets Made from Wool,
Camel Hair and Goat Hair**
(Clauses 3.1 and 4.1)

Variety No.	Count of Yarn (Approximately)		Ends/dm	Picks/dm	Mass g/m ²	Mass of Warp	Mass of Weft
(1)	Warp (2)	Weft (3)	(4)	(5)	(6)	g/m ² (7)	g/m (8)
Woollen	30 tex × 6	220 tex (treble)	40 ± 2	150 ± 2	1 150 ± 20	150 ± 10	1 000 ± 20
Woollen	60 tex × 12	280 tex (treble)	48 ± 2	102 ± 2	1 200 ± 20	350 ± 10	850 ± 20
Camel hair	60 tex × 8	1 100 tex	50 ± 2	100 ± 2	1 400 ± 50	250 ± 10	1 150 ± 50
Goat hair	60 tex × 10	4 430 tex	24 ± 2	44 ± 2	2 100 ± 100	140 ± 15	1 960 ± 100
Methods of Test	—	—	Annex A	Annex A	Annex B	Annex C ⁽¹⁾	Annex C ⁽¹⁾

⁽¹⁾ To be determined only in case of dispute.

Table 2 Colour Fastness Ratings
(Clause 4.2)

Fastness to	Numerical Ratings	Method of Test, Ref to IS
(1)	(2)	(3)
Light	3 or better	2454
Water	3 or better	767
Organic solvents	3 or better	688

4.3.1 The length and width of druggets shall be determined by the method prescribed in Annex D.

4.4 Sealed Sample

If, in order to illustrate or specify the quality of wool/camel hair/goat hair, general appearance, feel and colour of druggets, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in these respects.

4.4.1 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

5 LABELLING, PACKING AND MARKING

5.1 A label giving the following information shall be attached to each druggets:

- Length and width; and
- Name of the manufacturer.

5.2 BIS Certification Marking

The druggets may also be marked with the Standard Mark.

5.2.1 The use of the Standard Mark is governed by the provisions of *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the license for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from Bureau of India Standards.

5.3 Packing

5.3.1 Druggets shall be sprinkled uniformly with sufficient quantity of suitable insecticide or bactericide (in case the druggets are not moth-proofed) and then rolled or folded. The rolled (or folded) druggets shall be tied securely to form a compact roll (or bale).

5.3.2 The package shall be wrapped with one layer of

polyethylene film minimum of 0.04 mm of thickness and one layer of medium hessian, so that the roll (or bale) is completely covered. The hessian shall be tightly stitched with jute twine or HDPE/PP twine. No two stitches shall be 50 mm apart.

5.4 Marking

5.4.1 The packages shall be neatly stenciled in indelible ink with the following information:

- Name of the material,
- Variety No. gross and net mass,
- Name of the manufacturer,
- Legend 'Use No Hooks',
- Month and year of the manufacture, and
- Any other information required by the buyer.

6 SAMPLING AND CRITERIA FOR CONFORMITY

6.1 Lot

All the druggets of the same variety and size delivered to one buyer against one dispatch note shall constitute a lot.

6.2 The conformity of the lot to the requirements of this standard shall be determined on the basis of the tests on the druggets selected from it.

6.3 Unless otherwise agreed to between the buyer and the seller, the number of druggets to be selected at random from the lot shall be in accordance with col 2 of Table 3. These druggets shall be selected from at least 20 percent of the packages, an equal number of druggets, as far as possible, being drawn at random from each package selected.

6.4 For evaluating : (a) ends and picks, (b) mass per square metre, and (c) dimensions, the sample selected as in col 2 of Table 3 shall constitute the test specimens.

6.4.1 For evaluating : (a) colour fastness, and (b) mass of warp and mass of weft per square metre, if required, the number of druggets specified in col 4 of Table 3 shall constitute the test sample.

6.5 Criteria for Conformity

The lot shall be considered to be in conformity with the requirements of the standard, if the following conditions are satisfied:

- The number of druggets found non-conforming in respect of any characteristic mentioned in **6.4** does not exceed the corresponding number given in col 3 of Table 3.
- All the druggets tested for the characteristics mentioned in **6.4.1** satisfy the corresponding requirements.

Table 3 Sample Size and Criteria for Conformity
[Clauses 6.3, 6.4, 6.4.1 and 6.5(a)]

Lot Size (1)	Sample Size (2)	Acceptance Number (3)	Sub-sample Size (4)
Up to 50	8	0	5
51–150	20	1	5
151–280	32	2	5
281–500	50	3	5
501–1 200	80	5	5
1 201–3 200	125	7	5
3 201 and above	200	10	5

ANNEX A

(Table 1)

METHOD FOR DETERMINATION OF ENDS AND PICKS PER DECIMETRE

A-1 TEST SPECIMENS

A-1.1 For the purpose of this test all pieces in the sample under test (*see* 6.4) shall constitute the test specimens.

A-2 PROCEDURE

A-2.1 Ends per Decimetre

Lay one of the druggets constituting the sample under test on a horizontal surface without stretching it. Place a correctly marked scale on the druggets in line with : (a) the first, and (b) the last weft from where the warp ends emerge to form fringes and count the actual number of ends in 100 mm. Take four readings, two on each side of the druggets. Calculate the average of the four readings.

A-2.1.1 Repeat the test with the remaining druggets constituting the sample under test.

A-2.2 Picks per Decimetre

Lay one of the druggets constituting the sample under test on a horizontal surface in the manner described under A-2.1. Place a correctly marked scale on the druggets along the selvedge and count the number of picks in 100 mm. Take four readings, two on each selvedge of the druggets. Calculate the average of the four readings.

NOTE — If necessary, use a counting glass for counting the number of picks.

A-2.2.1 Repeat the test with the remaining druggets constituting the sample under test.

A-3 REPORT

A-3.1 Report the lot to be in conformity with the requirements of Table 1, if the test values satisfy the conditions prescribed in 6.5(a).

ANNEX B

(Table 1)

METHOD FOR DETERMINATION OF MASS PER SQUARE METRE

B-1 TEST SPECIMENS

For the purpose of this test all druggets in the sample under test (*see* 6.4) shall constitute the test specimens.

B-2 PROCEDURE

B-2.1 Determine the mass of one drugget to the nearest 10g. Calculate the area from the length and width determined as per method specified in Annex D. Calculate the mass per square metre to the nearest 10g.

B-2.2 Determine similarly the mass per square metre of all the remaining druggets constituting the sample under test.

B-3 REPORT

Report the lot to be in conformity with the requirements of Table 1 if the test values satisfy the conditions prescribed in 6.5(a).

ANNEX C

(Table 1)

**METHOD FOR DETERMINATION OF THE MASS OF WARP AND
THE MASS OF WEFT PER SQUARE METRE****C-1 SWATCHES**

From each druggets constituting the sample under test (see 6.4.1), one swatch slightly larger than 1m^2 in area shall be cut off and conditioned as prescribed in C-3.

C-2 CONDITIONING OF SWATCHES

Prior to test, the swatches shall be conditioned for 48 h in a standard atmosphere at 65 ± 2 percent relative humidity and $27 \pm 2^\circ\text{C}$ temperature (see also IS 196), in such a way as to expose, as far as possible, all portions of the swatches to the atmosphere.

C-3 ATMOSPHERIC CONDITIONS FOR TESTING

The test shall be carried out in the standard atmosphere or within a period of 5 min of the removal of the swatches from the standard atmosphere.

C-4 TEST SPECIMENS

From each swatch drawn as in C-1 and conditioned as in C-2, one test specimen measuring 1m^2 shall be either

stamped out or cut by means of a template and razor blade, in such a manner as to exclude the selvage and the fringes.

C-5 PROCEDURE

Unravel one test specimen and pull out carefully the warp and the weft yarns and mass each separately in grams. Repeat the test with the remaining test specimens.

C-6 REPORT

Report the lot to be in conformity with the requirements of Table 1 if the test values satisfy the conditions prescribed in 6.5(b).

NOTE — In case the size of druggets is such that the swatches of the size mentioned under C-1 can not be obtained, condition, as prescribed under C-2 the test sample and cut test specimens of the largest size practicable (see C-4) and evaluate them as prescribed under C-5. Calculate the mass of warp per square metre, and the mass of weft per square metre from the mass values and the actual dimensions of the test specimens.

ANNEX D

(Clause 4.3.1)

METHOD FOR DETERMINATION OF LENGTH AND WIDTH**D-1 TEST SPECIMENS**

For the purpose of this test all the pieces in the sample under test (see 6.4) shall constitute the test specimens.

D-2 PROCEDURE**D-2.1 Length**

Lay a druggets on a flat surface and render it free from all creases and wrinkles. With a metallic measuring tape measure correct to the nearest 1 cm the length of the druggets, excluding the fringes, at three different places uniformly distributed along the width of the druggets. Calculate the average of the three readings and round off to the nearest centimetre.

D-2.2 Width

With a metallic measuring tape measure correct to the nearest 1 cm the width of the same druggets, including the two selvages, at four different places uniformly distributed along the length of the druggets. Calculate the average of the four readings and round off to the nearest centimetre.

D-3 REPORT

Report the lot to be in conformity with the requirements of 4.3, if the test values satisfy the conditions prescribed in 6.5(a).

ANNEX E

(Foreword)

COMMITTEE COMPOSITION

Wool and Wool Products Including Floor Coverings Sectional Committee, TX 04

<i>Organization</i>	<i>Representative(s)</i>
Central Sheep & Wool Research Institute (ICAR), Avikanagar	SHRI P. C. PATNI (<i>Chairman</i>) DR D. B. SHAKYAWAR (<i>Alternate</i>)
All India Wool Felt and Namdha Association, Jaipur	SHRI SUDHIR BAKLIWAL
All India Woollen Shoddy Mills Association, Panipat	SHRI S. K. AGGARWAL
Amritsar Swadeshi Woollen Mills, Mumbai	SHRI RAJIV KHANNA
All India Carpet Manufacturer's Association, Bhadohi	PRESIDENT HON SECRETARY (<i>Alternate</i>)
Bikaner Woollen Mills, Bikaner	SHRI JAI CHAND LAL BOTHRA
Central Wool Development Board, Jodhpur	DR D. K. DHODAWAT
Carpet Export Promotion Council, New Delhi	SHRI T. S. CHADHA
Directorate of Handicrafts, Government of J&K, Srinagar	SHRI M. A. ALLAGUBAND
Directorate General of Supplies & Disposals (Inspection Wing), New Delhi	SHRI SUNDER LAL SHRI SAMIRON ROY (<i>Alternate</i>)
Directorate of Animal Husbandry, Government of Rajasthan, Jaipur	DR U. K. THANVI
Khadi and Village Industries Commission, Mumbai	SHRI S. K. SINHA SHRI S. P. GUPTA (<i>Alternate</i>)
Mumbai Grahak Panchayat, Mumbai	REPRESENTATIVE
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Office of the Textile Commissioner, Mumbai	SHRI S. P. GHOSAL
Office of the Jute Commissioner, Kolkata	ASSISTANT DIRECTOR (JT) ASSISTANT DIRECTOR (TECH) (<i>Alternate</i>)
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Textiles Committee, Mumbai	SHRI P. K. MANDAL SHRI B. K. PRASAD (<i>Alternate</i>)
Wool Text Pro, Mumbai	SHRI RAVIKANT KAPUR
Wool and Woollen Export, Export Promotion Council, Delhi	DR D. K. VERMA SHRI ASHOK K. MADHRA (<i>Alternate</i>)
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Wool Research Association, Thane	SHRI S. C. AGARWAL SHRIMATI G. P. RANE (<i>Alternate</i>)
BIS Directorate General	SHRI M. S. VERMA, Director (TXD) [Representing Director General (<i>Ex-officio Member</i>)]

Member Secretary
SHRI B. L. BHARATI
Joint Director (TXD), BIS

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